Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

- 1. (Currently Amended) An isolated nucleic acid encoding a taste transduction G-protein coupled receptor, wherein the receptor comprises an amino acid sequence having at least 80% 90% identity to SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3, and wherein the receptor has G-protein coupled receptor activity binds to glutamate, which induces GPCR activity.
- 4. (Original) The isolated nucleic acid of claim 1, wherein the nucleic acid encodes a receptor comprising an amino acid sequence of SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3.
- 5. (Original) The isolated nucleic acid sequence of claim 1, wherein the nucleic acid comprises a nucleotide sequence of SEQ ID NO:4, SEQ ID NO:5, or SEQ ID NO:6.
- 6. (Original) The isolated nucleic acid of claim 1, wherein the nucleic acid is from a human, a mouse, or a rat.
- 8. (Original) The isolated nucleic acid of claim 1, wherein the nucleic acid encodes a receptor having a molecular weight of about between 92 kDa to about 102 kDa.
 - 34. (Original) An expression vector comprising the nucleic acid of claim 1.
 - 35. (Original) A host cell transfected with the vector of claim 34.
- 61. (Currently Amended) A method of making a taste transduction G-protein coupled receptor, the method comprising the step of expressing the receptor from a recombinant expression vector comprising a nucleic acid encoding the receptor, wherein the receptor comprises an amino acid sequence having at least 80% 90% sequence identity to SEQ ID NO:1,

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SEQ ID NO:2, or SEQ ID NO:3, and wherein the receptor <u>has G-protein coupled receptor</u> activity <u>binds glutamate</u>, which induces GPCR activity.

- 62. (Currently Amended) A method of making a recombinant cell comprising a taste transduction G-protein coupled receptor, the method comprising the step of transducing the cell with an expression vector comprising a nucleic acid encoding the receptor, wherein the receptor comprises an amino acid sequence having at least 80% 90% sequence identity to SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3, and wherein the receptor has G-protein coupled receptor activity binds glutamate, which induces GPCR activity.
- 63. (Currently Amended) A method of making an recombinant expression vector comprising a nucleic acid encoding a taste transduction G-protein coupled receptor, the method comprising the step of ligating to an expression vector a nucleic acid encoding the receptor, wherein the receptor comprises an amino acid sequence having at least 80% 90% sequence identity to SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3, and wherein the receptor has G-protein coupled receptor activity binds glutamate, which induces GPCR activity.
- 64. (Currently Amended) The nucleic acid of claim 1, wherein the receptor comprises an amino acid sequence have at least 90% 95% sequence identity to SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3.
- 65. (Currently Amended) The method of claim 61, wherein the receptor comprises an amino acid sequence have at least 90% 95% sequence identity to SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3.
- 66. (Currently Amended) The method of claim 62, wherein the receptor comprises an amino acid sequence have at least 90% 95% sequence identity to SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3.

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67. (Currently Amended) The method of claim 63, wherein the receptor comprises an amino acid sequence have at least 90% 95% sequence identity to SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3.